

## REMARKS

In the Office Action mailed June 30, 2006 in the above case claims 1-25 and 30-33 were examined and remain pending. Claims 26-29 remain withdrawn.

Claims 1-25 are rejected on the basis of nonstatutory obviousness-type double patenting over U.S. Patent No. 6,960,360 B2. Claims 1-19 and 30-33 are rejected as obvious over *Gabetta* (U.S. Patent No. 5,200,186) in view of *Langston* (U.S. Patent No. 4,500,556) and *S.O.R.I.* (GB Patent No. 1,235,379).

Reconsideration and withdrawal of the rejections are respectfully requested in view of the above amendments and the remarks which follow.

A. Rejection of Claims 1-25 for Nonstatutory Obviousness-type Double Patenting over U.S. Patent No. 6,960,360 B is Addressed

The rejection of claims 1-25 for nonstatutory obviousness-type double patenting over U.S. Patent No. 6,960,360 is addressed by the Terminal Disclaimer filed October 18, 2006. If not already charged, please charge Deposit Account No. 50-1123 the \$65.00 small entity Terminal Disclaimer fee.

B. Obviousness Rejection of Claims 1-19 and 30-33 over Gabetta in view of Langston and S.O.R.I. is Addressed

Claims 1-19 and 30-33 are rejected as obvious over a combination of three references: *Langston*; *Gabetta*; and *S.O.R.I.* The rejection is respectfully traversed in view of the clarifying amendments above to claim 1 and claim 30.

1. As Amended, Claim 1 and Dependent Claims 2-18 Recite the Use of a Substituted Resin, Which Results in a More Efficiently Purified Extract than that of Gabetta or Langston.

Amended claim 1 makes it clear the claimed invention requires the contacting of a filtered extract with a substituted polymer resin comprising aromatic rings substituted with one or more electron-withdrawing groups. The functionality of this step is quite different than when contacting the same extract with the neutral resins of *Gabetta* or *Langston*.

*Gabetta* teaches a non-polar polystyrenic resin which is unsubstituted. Such a resin is a neutral and unfunctionalized resin. Because *Gabetta*'s resin is unsubstituted and unfunctionalized, *Gabetta* teaches the addition of sodium bisulfite during the resin contacting period. Also, as noted by the Examiner, the produce may contain mineral salts, common organic acids, etc.,

In contrast, the method claims of claim 1 require contact with a substituted polystyrene resin substituted with one or more electron-withdrawing groups. By so substituting the polystyrene resin, substantial functionality is added, resulting in the selective and efficient purification of phenols beyond that taught by *Gabetta*.

Thus, while *Gabetta* and the present invention both employ polystyrene resins, *Gabetta*'s resin is neutral and unsubstituted and the resin used claims 1-19 is substituted and functional. They are not of the same class and have different functionalities during purification.

Likewise, *Langston* teaches the use of an unfunctionalized, unsubstituted polystyrene resin. While divinylbenzene is left over from the polymerization process and can be expected to be found stuck in the polymer matrix, it does not constitute a substituted electron withdrawing group. Functionally, *Langston* is similar to *Gabetta*, and *Langston*'s use of a neutral resin accounts for the use of the solvent containing  $\text{HSO}_3^-$  needed to extract anthocyanins.

*S.O.R.I.* teaches anionic resins used in the presence of a strong acidic medium. Anionic resins are different than the "aromatic rings substituted with one or more electron-withdrawing groups" recited in independent claims 1. If substituted at all, *S.O.R.I.* are substituted with electron-donating groups. Thus, *S.O.R.I.* also fails to teach a method requiring contact with a resin having "aromatic rings substituted with one or more electron-withdrawing groups" recited in independent claim 1.

Given that the step of claims 1-19 of the present invention requires contact with substituted resins having aromatic rings substituted with one or more electron-withdrawing groups, a step neither taught nor suggested by *Gabetta*, *Langston*, or *S.O.R.I.*, alone or in combination, claims 1-19 are patentably distinguishable over the combination. Withdrawal of the § 103 rejection of claims 1-19 is therefore proper and respectfully requested.

2. As Amended, Claim 30 and Dependent Claims 31-33 Recite a Patentable Method of Purifying Proanthocyanidins.

Claim 30 has been amended to more clearly claim the present invention in which compositions are selectively enriched in proanthocyanidins with decreased concentrations of anthocyanins and polar non-phenolic compounds. The method includes the step of:

(c) contacting the crude extract with a resin comprising

unsubstituted aromatic rings which retains said anthocyanins and releasably adsorbs said proanthocyanidins but does not substantially retain the polar non-phenolic compounds, without the addition of bisulfite ions;

The inventors discovered that by then eluting the resin, proanthocyanidins could be selectively extracted, as the anthocyanins would not be as effectively retained by the resins without the addition of bisulfite ions. Compositions enriched in proanthocyanidins with low levels of anthocyanins are thus achieved, as claimed.

This method is patentably different than that of *Gabetta*, which requires the use of bisulfite ions and concentrates anthocyanins. It is also distinguishable over *Langston*, which requires the use of  $\text{HSO}_3^-$  ions and does not teach separate elutions to preferentially concentrate proanthocyanidins. It is also distinguishable over *S.O.R.I.* which teaches anionic resins used with a strong acidic medium and fails to preferentially concentrate proanthocyanidins.

Thus, claims 30-33 are patentably distinguishable over *Langston*, *Gabetta* and *S.O.R.I.*, for the reasons given above. Withdrawal of the § 103 rejection of claims 30-33 thus proper and respectfully requested.

C. Petition for 1-Month Extension

In the October 18, 2006 Amendment and Response, Applicant petitioned for a 1-Month Extension of Time, extending the due date of the response from September 30, 2006 to October 30, 2006. If not already done so, please charge Deposit Account No. 50-1123 the \$60.00 small entity 1-month extension fee and any other fee associated with this filing.

D. Conclusion.

All claims now being in form for allowance, such action is respectfully requested. Should any issues remain, the Examiner is kindly asked to telephone the undersigned.

Respectfully submitted,

  
Carol W. Burton, Reg. No. 35,465  
Hogan & Hartson L.L.P.  
1200 17<sup>th</sup> Street, Suite 1500  
Denver, CO 80202  
Telephone: (303) 454-2454  
Facsimile: (303) 899-7333

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